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TECHNOLOGY CENTER 3700

IN THE CLAIMS:

CLEAN VERSION OF THE AMENDED CLAIMS

1. (three times amended) An internal high-pressure deformation method comprising

furnishing a first workpiece part with a first flange having a first sealing face;

furnishing a second workpiece part with a second flange having a second sealing face, wherein the first sealing face matches the second sealing face to deliver a sealing connection between the first flange and the second flange;

disposing the first workpiece part and the second workpiece part such that the first sealing face is disposed opposite to the second sealing face;

surrounding the first workpiece and the second workpiece by first tool region, a second tool region and a third tool region forming a mold, wherein the third tool region is subdivided into a first segment and a second segment;

pressing the first sealing face against the second sealing face such that the connection between the first flange and the second flange is sealed relative to a fluid pressurizing agent;

feeding pressurizing fluid into an area delimited by the first workpiece and by the second workpiece;

deforming the first workpiece and the second workpiece jointly by internal high-pressure against the first tool region, the second tool region and the third tool region;

moving the first tool region away from the deformed first workpiece and the deformed second workpiece;

moving the first segment away from the deformed first workpiece, the deformed second workpiece and the second segment in a direction different from the direction of pressing of the first sealing face against the second sealing face to allow removal of the deformed first workpiece and of the deformed second workpiece from the mold.

2. (twice amended) The internal high-pressure deformation method according to claim 1 further comprising
inserting a third workpiece part adjoining the first flange region into the deformation tool; and
pressing the first flange against the third flange in a pressurizing fluid sealing way;

deforming the third workpiece part together with the first workpiece part and the second workpiece part.

3. (twice amended) The internal high-pressure deformation method according to claim 1 further comprising allowing a relative motion toward each other of the first workpiece part and of the second workpiece part during the pressurizing fluid sealingly pressing in the region of the first flange and of the second flange.

4. (twice amended) The internal high-pressure deformation method according to claim 1 further comprising performing a stamping in the region of the first flange and of the second flange during the pressurizing fluid sealingly pressing together of the workpiece parts for influencing a flow of the material and/or for supporting a sealing and/or for accomplishing a positional fixation between the individual workpiece parts.

6. (twice amended) The internal high-pressure deformation method according to claim 1 further comprising feeding pressurizing fluid through a docking connection between a pressure feed and an opening in the second workpiece part.

11. (twice amended) An internal high-pressure deformation method for the production of undercut hollow bodies by employing at least two workpiece parts (1,2), which two workpiece parts (1,2) are pressed by pressurizing fluid sealingly in the region of a flange (1. 1,1.2) and which two workpiece parts (1,2) are deformed jointly, wherein the deforming is performed against an engraving surface, wherein the parts of the engraving surface are movable away from each other in a direction of intersecting axes.

12. (twice amended) The internal high-pressure deformation method according to claim 11 wherein more than two workpiece parts (1,2) adjoining each other in the flange region are inserted into the deformation tool and are pressed against each other with pressurizing fluid sealingly in the flange region and are deformed.

13. (twice amended) The internal high-pressure deformation method according to claim 11 wherein the work piece parts (1,2) allow a relative motion toward each other during the pressurizing fluid sealingly pressing in the flange region (1.1, 2.1).

14. (twice amended) The internal high-pressure deformation method according to claim 11 wherein a stamping is performed in the region of the flanges (1.1, 2.1) during the pressurizing fluid sealingly pressing together of the workpiece parts (1,2) in order to influence the flow of the material and/or to support the sealing and/or to accomplish a positional fixation between the individual workpiece parts (1,2).

15. (three times amended) An apparatus for production of undercut hollow bodies, wherein the apparatus is subdivided into an upper tool region (E1), a middle tool region (E2), and a lower tool region (E3) corresponding to a workpiece form to be generated and the number of workpiece parts (1, 2), wherein the upper tool is disposed in an upper plane, wherein the middle tool region is disposed in a middle plane, and wherein the lower tool region is disposed in a lower plane, wherein the middle tool region is subdivided into a first segment (S1) and a second segment (S3) according to the shape of the workpiece, wherein the workpiece is pressed by internal high pressure deformation using a liquid pressure medium, and wherein the first segment (S1) and the second segment (S3) are movable

3
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away from the hollow body (W) for removal of the hollow body (W) from the mold and further comprising

means for moving the first segment from the second workpiece part in a direction disposed at an angle relative to a pressing direction performed by the first tool region and by the second tool region;

means for moving the second segment from the second workpiece part in a direction different from a pressing direction of the first tool region or of the second tool region and away from the first segment.

4
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18. (amended) An apparatus for production of bulged out and undercut hollow bodies comprising

a first tool region;

a second tool region;

a third tool region, wherein the third tool region is subdivided into a first segment and a second segment,

wherein the first tool region corresponds to a first workpiece part,

and wherein the second tool region and the first segment and the second segment correspond to a second workpiece part, wherein the tool regions are disposed on top of each other;

means for moving the first tool region in a direction away from the location of the second tool region;

means for moving the first segment from the second workpiece part in a direction disposed at an angle relative to a pressing direction performed by the first tool region and by the second tool region;

means for moving the second segment from the second workpiece part in a direction different from a pressing direction of the first tool region or of the second tool region and away from the first segment.

20. (amended) A die for production of bulged out and undercut hollow bodies comprising

an upper tool region having a molding surface at its bottom side;

a middle tool region comprising a right segment having a molding surface on a left hand side and a left segment having a molding surface on a right hand side; a lower tool region having a molding surface at its top side, wherein the molding surface at the bottom side, the molding surface at the right hand side, the molding surface at the left hand side and the molding surface at the top side correspond to a workpiece form to be generated and wherein the right segment is removable toward the right side and wherein the left segment is removable toward the left hand side for allowing removal of a hollow workpiece.